

QUERCUS XMEGALEIA LAUGHLIN

Hibrida nova

*Quercus lyrata* Walt. X *macrocarpa* Michx.

Kendall Laughlin (1890- )  
165 Pine Ave., Chicago, Ill.

A tree 1.09 m. in diameter and 29 m. tall with slender spreading branches 2 m. and higher above the base and stout ascending limbs. Bark rather light gray and rather thin; lower portion shallowly ridged, upper portion nearly smooth and interrupted by narrow vertical cracks. Branchlets glabrate at the end of the season, angled, grayish orange brown with numerous white lenticels. Terminal winter buds 4 mm. long, 3 mm. wide, ovoid, broadly rounded at the apex, light brown, puberulous.

Leaf blades 10-20 cm. long, 4.5-13 cm. wide, firm, dull moderate yellow green on both sides, glabrous above, soft-pubescent beneath with a tomentose yellow midrib, obovate in peripheral outline, symmetrically and deeply divided into 4 or usually 5 pairs of lateral lobes tapering toward the apex (rarely three-lobed with a pair of broad divaricate upper lobes sometimes bilobulate), the third or fourth pair the longest and often bilobulate, separated by rounded sinuses about as wide as the lobes; base cuneate, apex lobulate.

Petioles .4-1.5 cm. long, slightly angled, pubescent or nearly glabrous late in the season.

Acorns 17-25 usually about 20 mm. long; cup cup-shaped, rather deeply impressed at the base, 14-18 mm. high, 25-33 mm. wide, covered with thick medium brown deltoid puberulous scales, overlapping, tuberculate and pointed or galeate at the base, shorter and thinner toward the rim and ending in a thin irregular edge; nut castaneous, puberulous, short-oblong, rather deeply impressed at the apex, which is eccentric in relation to the rim of the cup, about two-thirds enclosed in the cup; peduncle 11-22 mm. long.

## QUERCUS XMEGALEIA Laughlin

Arbor 1.09 m. diametro et 29 m. alta cum gracilibus extendentibus ramis 2 m. altioribusque super basim et pinguibus ascendentibus membris. Cortex pallidior cinereus et tenuior; inferior leviter fastigatus, superior fere laevis et angustis ad perpendiculum directis rimis interruptus. Ramuli temporis fine glabrati, angulati, cinerei lutei brunnei numerosis albis lentiscellis. Extremae hiemales gemmae 4 mm. longae, 3 mm. latae, ovoidae, in apice late rotundata, pallidae brunneae puberulentes.

Folia 10-20 cm. longa, 4.5-13 cm. lata, firma, in ambobus lateribus hebetia galbina, supra glabra, subtus leniter pubescentia tomentosa flava costa media, circumcurrente adumbratione obovata, concinne et alte divisa in 4 vel plerumque 5 lobos lateralis utroque latere fastigantis ad apicem (raro ter lobata lato divaricato superiore lobo utroque latere interdum bilobulato), tertios vel quartos longissimos et saepe bilobulatos, separatos rotundis sinibus circa tam latis quam lobi; base cuneata, apice lobulato.

Petioli .4-1.5 cm. longi, leviter angulati, pubescentes vel fere glabri sero tempore.

Glandes 17-25 plerumque circa 20 mm. longae; cupula poculoformis, in base altius impressa, 14-18 mm. alta, 25-33 mm. lata, tecta crassis brunneis triangulis puberulentibus squamis imbricatis, tuberculatis acutisque vel galeatis in base, brevioribus tenuioribusque ad marginem et finitis tenui inaequali margine; nux coloris castanae, puberulens, breviter oblonga, altius impressa in apice, qui est eccentricus ad cupulae marginem, circa duobus-tertiis conclusa in cupula; pedunculus 11-22 mm. longus.

## DISCUSSION

This newly discovered hybrid of the Overcup Oak lyrata Walt. and the Bur Oak macrocarpa Michx., which has an average diameter of 3 feet 7 inches, a circumference of 11 feet 3 inches and an estimated height of 96 feet, is located in a second growth area of the <sup>1</sup>Big Oak Tree State Park in Mississippi County, Missouri, about 225 feet north of the south border of Section 10 T23N R16E and about a quarter of a mile west of the southeast corner of the same section. It is on the south side of a truck trail and there is a Baldcypress 22 feet 8 inches in circumference, the largest tree in girth in Missouri, about eleven hundred feet to the east. This tree is one of the very few remnants of virgin timber in Section 10. This

tree, the A.F.A. champions Green and Pumpkin Ashes and a Cottonwood 17 feet 5 inches in circumference fork at some distance above the base and were passed over by the early timber cutters as unfit for cutting because there was plenty of straight timber.

The leaves of this tree are intermediate between the parent species. In lyrata the width of all the lobes is less than half the distance from the base to the apex of the blade. In macrocarpa the lobes are wider than the sinuses. In megaleia the lobes and sinuses are of about the same width. In one rare form the leaves resemble the Post Oak. The leaves of megaleia show some resemblance to bebbiana, but the principal lobe is larger. The bark is like the White Oak. In its general appearance megaleia shows a strong superficial resemblance to the White Oak. The White Oak is not found in this park and occurs but sparingly elsewhere in the county.

Megaleia's acorns are odd. The awnless cups are wider than the average of lyrata. Both ends are impressed, a character I have not observed in any species. The impressed and eccentric apex of the nut gives one the impression that the nut has shrunk and moved around in the cup. Actually the nut, which has a very hard shell 4 mm. thick, is firmly imbedded in and attached to the cup in its distorted position and cannot be moved.

That lyrata and macrocarpa are closely related is shown by their juxtaposition in a table of sequence of species. Nevertheless it is not surprising that a hybrid between the two has not previously been discovered because they rarely grow together.<sup>2</sup> Lyrata inhabits the floodplains of the Southern States. Macrocarpa inhabits savannas and codominates woods containing smaller species in the north central states.<sup>3</sup> Both occur in large numbers and reach prodigious size<sup>3</sup> in Miquoria, macrocarpa having acquired exceptional tolerance in competition with large Southern species in these bottoms.

The holotype will be deposited in the Royal Botanic Gardens, Kew, England, and an isotype will be deposited in the U.S. National Herbarium, Washington, D.C., by way of the U.S. Forest Service.

<sup>1</sup>One and one-half miles from the Mississippi River; described in PHYTOLOGIA 4:154-155.

<sup>2</sup>The maps in Figures 18 and 19 on pages 14 and 15 of "Oaks (Eastern)" of the Forest Service, U.S. Department of Agriculture, Revised September 1959, are very instructive in showing the complementary (vicarious) ranges of these two species.

THE TYPE TREE  
OF  
QUERCUS  
XMEGALEIA

Seedlings  
in the  
foreground





FOLIAGE OF QUERCUS XMEGALEIA

21% of natural size



Longitudinal Section of an Acorn



ACORNS OF QUERCUS XMEGALEIA

One-third of natural size

<sup>3</sup>See the table of dimensions on page 376 of Volume 6 of PHYTOLOGIA.

<sup>4</sup>"MIQUORIA" is a name coined by the author to take the place of "Big Oak Tree State Park," being brief, euphonious and descriptive. It is made up as follows: MI from Mississippi Co. and River; QU from Quercus; ORIA from Hicoria.

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NOTES ON NEW AND NOTEWORTHY PLANTS. XXX

Harold N. Moldenke

CLERODENDRUM RAMOSISSIMUM var. BARBATUM Moldenke, var. nov.

Haec varietas a forma typica speciei calycibus dense patente-que hispido-barbatis recedit.

This variety differs from the typical form of the species in having the calyx densely hispid-barbate with white hairs spreading at right angles to the calyx.

The type of the variety was collected by Karl Rudolf Afzelius at Manosoa, in the province of Tulear, Madagascar, on January 10, 1913, and is deposited in the herbarium of the Naturhistoriska Riksmuseum at Stockholm.

CLERODENDRUM SUMATRANUM var. FAIRCHILDII Moldenke, var. nov.

Haec varietas a forma typica speciei petiolis laminisque glabris recedit.

This variety differs from the typical form of the species in having its petioles and leaf-blades glabrous.

The type of the variety was collected by David Fairchild (no. 488) — in whose honor it is named — although first discovered by James Dorsett, near the trail from Baleeg to the Turpentine Still near Iakengon, Sumatra, on March 5, 1926, and is deposited in the herbarium of the University of California at Berkeley.

5-403 ERIOCAULON MINUSCULUM Moldenke, sp. nov.

Herba annua parvissima 1--2.3 cm. alta ubique glaberrima; foliis linearibus filiformibus 7--13 mm. longis; pedunculis solitariis rectis ca. 2 cm. longis 4-costatis non tortis; vaginis arcte adpressis ca. 1 cm. longis pellucidis ad apicem oblique fissis; capitulis solitariis nigris 1--3 mm. latis paucifloris.

Very small annual herb, 1--2.3 cm. tall, glabrous throughout; leaves linear-filiform, few, 7--13 mm. long, subulate at the apex, subpellucid; peduncles solitary, erect, about 2 cm. long, 4-costate, not twisted, stramineous; sheaths closely appressed to the peduncle, about 1 cm. long, pellucid, obliquely split at the apex, the lobes erect; heads solitary, black, 1--3 mm. wide, few-flowered, glabrous; involucre bractlets broadly obovate, shiny,